

A.S.T.I SUBMISSION

TO

**NATIONAL DIGITAL LEARNING
STRATEGY**

June 2021

Executive Summary of ASTI Submission

Digital acceleration and learning from the pandemic

The context for the second digital strategy is significantly more challenging than even six years ago. The COVID-19 pandemic has accelerated a global digital transformation. The shift to remote teaching had underlined the potential and limitations of digital technologies in education. It has also exposed an unacceptable digital divide overlying other education inequalities. A significant body of research is already available on teachers, students and parents' experiences of remote learning which should inform future strategy.

Building on strengths and addressing limitations

The current strategy has a number of strengths including a humanistic vision and core principles. The principle 'no one left behind' must be included to address the education digital divide. Teachers' response to remote teaching was one of professionalism, innovation, resilience and care. Significant learning has happened. This is a strength. However, that strength is undermined by unaddressed systemic problems of teacher workload, curriculum overload, unequal pay and lack of professional time. ICT infrastructure also needs to be significantly upgraded to remove digital divide.

Challenges schools faced in the integration of digital technologies into teaching, learning and assessment practices

Systemic challenges include lack of professional time for teachers; access to professional learning, in particular, collective learning in the school/practice context; insufficient leadership posts; curriculum change experienced as 'innovation overload'; implementation policy not supported by conducive conditions; excessive workload; poor working conditions for teachers, in particular unequal pay scales for post-2011 entrants.

Key areas and priorities that should be addressed in the development of the new digital strategy for schools

The key areas that must be addressed are financing to strengthen the ICT infrastructure and address the digital divide; ensuring all teachers and students are provided with laptops/adequate digital devices; investing in the teaching profession by providing professional time, reducing workload and ensuring access to professional learning beyond that of the transmission of information; increasing the number of leadership posts in schools; developing vision for digital literacy and providing guidance on how it is integrated into subjects and the wider curriculum.

1. Introduction

The COVID-19 pandemic has dramatically accelerated what it ubiquitously acknowledged as the digital transformation. The latter comprises processes of digitalization, robotization, the Internet of Things, and Artificial Intelligence which are already changing the way we live, work, communicate, learn, even love! Genetic engineering and nano technology are changing what it means to be a human being. Profound ethical and philosophical issues are emerging which require new concepts, new philosophical paradigms and new modes of global cooperation, governance and regulation. By dramatically exposing systemic inequalities and divides, the COVID-19 pandemic has forced equity to the forefront of education policy. In these circumstances, developing a digital strategy for schools assumes an unprecedented urgency and importance. Such as strategy can no longer focus exclusively on enabling the integration of digital technologies to support quality teaching and learning. Rather, it must also provide guidance on how schools as institutions and teachers as educators can prepare young people to live and flourish in a world in which almost all aspects of human experience are impacted by digital technologies. The 2020 OECD Report – *Educating 21st Century Children: Emotional Wellbeing in the Digital Age* – sets out high priority issues for policy-makers which are of relevance to the development of Ireland’s second digital strategy.¹ Equally significant is the PISA-based 2021 OECD Report - *21st-Century Readers: Developing Literacy Skills in a Digital World*.²

2. Building on current strengths

A major strength of the current strategy is its articulation of a clear vision statement, namely, to realise the potential of digital technologies to enhance teaching, learning and assessment so that Ireland’s young people become engaged thinkers, active learners, knowledge constructors and global citizens to participate fully in society and the economy. A further strength is the fact that the strategy is its alignment with and adaption of the UNESCO ICT Competency Framework in Education and the EU Digital Competency Framework. At the same time, given the ‘digital acceleration’ driven by the pandemic, the vision will need to be built upon to reflect the changing circumstances.

The principles set out in the current digital strategy are strong. However, in light of system knowledge of the digital divide, they need to be supplemented by that of ‘no one left behind’. This principle is central to Sustainable Development Goal 4 and requires considerations of equity to be paramount at all levels of education policy and practice.

The shift to remote teaching has demonstrated a hitherto under-acknowledged strength in Irish education, namely, the quality of, and the high level of trust in, the teaching profession. Both the ongoing academic research and the extensive public discourse has highlighted the high standards of teacher professionalism, their capacity to adapt to change, their readiness to upskill, and above all, their ethical concerns regarding the holistic wellbeing of their students.³ This has significant implications for the morale and status of the teaching profession and its attractiveness to younger generations.

¹ https://read.oecd-ilibrary.org/education/educating-21st-century-children_b7f33425-en#page14

² <https://www.oecd-ilibrary.org/docserver/a83d84cb-en.pdf?expires=1622560265&id=id&accname=guest&checksum=A6F1DBD46DC44052B507A4E6DBC7AC0C>

³ <https://www.tcd.ie/Education/research/covid-19/>; <http://mural.maynoothuniversity.ie/13914/>

The shift to remote teaching and learning can also, in policy terms, be viewed as an unprecedented opportunity for learning about how ICT is being used by teachers and students; its potential and limitations; barriers and enablers; optimum modalities for its integration into classroom teaching; skills which teachers require. Again, the ongoing research of academics, teacher unions and other education agencies are important sources of evidence for developing the next digital strategy, as is the OECD 2021 PISA-related report.

3. Addressing current weaknesses

From the perspective of the ASTI, the major weakness in current education policy remains under-investment in schools. Volume 5 of PISA 2018 provides strong empirical evidence of the limitations imposed on schools due to under-investment.⁴ Key findings for Ireland include:

- 56.5% of Irish students were in schools where the principal agreed or strongly agreed that the number of digital devices connected to the internet was sufficient compared to the OECD average of 67.2%
- 45.3% of Irish students were in schools where the principal agreed or strongly agreed that the number of digital devices for instruction was sufficient compared to the OECD average of 59%
- 45.4% of Irish students were in schools where the principal reported that an effective online learning support platform was available compared to the OECD average of 54.1%.
- 47.4% of Irish students were in school where the principal agreed or strongly agreed that professional resources were available for teachers to learn how to use digital devices instruction compared to the OECD average of 64.7%

Ireland was ranked at or above the OECD average on two scores:

- 75.9% of Irish students were in schools where the principal agreed or strongly agreed that the school's Internet bandwidth or speed is sufficient compared to the OECD average of 67.5%
- 71.9% of Irish students were in schools where the principal agreed or strongly agreed that the availability of appropriate software is sufficient compared to the OECD average of 71.3%

Teachers are *the* most important resource in education systems and investing in the profession in Ireland falls markedly below that of comparator OECD countries. Investing in the profession includes several dimensions, including allocation of professional (i.e., non-teaching time), access to professional learning resources, provision of incentives to integrate ICT, access to online learning support platform and availability of technical staff to support ICT infra-structure. On each of these dimensions, Irish schools were less well served than comparator OECD countries.

- 51.1% of Irish students were in schools whose principal agreed that teachers have sufficient time to prepare lessons integrating digital devices compared to the OECD average of 60.9%

⁴ PISA 2018 RESULTS, *Effective Policies, Successful Schools*, Volume V

- 47.4% of Irish students were in schools whose principal agreed that effective professional resources were available for teachers to learn how to use digital devices compared to the OECD average of 64.7%
- 36.2% of Irish students were in schools whose principal agreed that teachers are provided with incentives to integrate digital devices in their teaching compared to the OECD averages of 56.7%
- 20.7% of Irish students were in schools whose principal agreed that the school has sufficient qualified technical assistant staff compared to the OECD average of 54.1%
- 45.4% of Irish students were in schools whose principal agreed that an effective online learning support platform is available for teachers compared to the OECD average of 54.1%

The OECD PISA model is, of course, subject to acknowledged limitations and can never fully capture the complexities of education systems. Nonetheless, it does represent a moment-in-time overview and one which, moreover, took place at least two years after the introduction of the national digital learning strategy. In this regard, its findings are of significance and confirm the findings in the annual OECD Education at a Glance reports of significantly lower levels of investment in Irish education.

4. Challenges schools faced in the integration of digital technologies into teaching, learning and assessment practices

From the ASTI perspective, schools faced a number of challenges in achieving the objectives of the national digital learning strategy. Some of these challenges were already flagged in the 2008 Inspectorate report, “*ICT in Schools*”.⁵ In fact, many of the recommendations of this Report such as the need for greater uptake of ICT training by teachers, a designated ICT co-ordinator in schools, a national structure for ICT technical support and maintenance in schools, more coherent school policies around ICT usage, remain central notwithstanding the evident changes which have taken place in schools with the implementation of the Digital Strategy Action Plans in 2017, 2018 and 2019.

Professional time for teachers: Professional time for teachers is emerging as one of the biggest concerns in the second-level teaching profession. Along with class size, lack of professional time to engage in non-classroom is creating unsustainable workloads for teachers. The latter is demoralising teachers’ morale and impacting negatively on their wellbeing. Research commissioned by the ASTI in 2018 confirmed that teachers’ average working week was 40+ hours.⁶ Over two-thirds of the non-classroom work was associated with preparation for classroom teaching, including lesson plans, marking homework, compiling resources, etc. Teachers do not have spare time in their working day to engage in meaningful collaborative work with colleagues across the wide and constantly expanding range of national strategies and associated school policies, implementation and evaluation practices.

Access to professional learning: Access to professional learning is, in the main, contingent on time and availability of suitable learning opportunities and resources. The research on effective professional learning underlines the importance of context, support or ‘scaffolding’, and peer-learning

⁵ <https://assets.gov.ie/25341/e8f06243628548008512ec38516d7ad8.pdf>

⁶ <http://www.asti.ie/document-library/teachers-work-work-demands-and-work-intensity-march-2018/>

activities.⁷ It is the ASTI's experience that teachers feel overwhelmed by the demands placed on them and under-supported to meet such demands. With the exception of mandatory curriculum change, teachers are expected to engage in most learning activities outside of school time, including the universally unpopular Croke Park hours. This is not a sustainable model for the future development of the teaching profession. Teachers need time to engage in learning during their working day. They need access to quality learning opportunities which meet identified criteria for effectiveness. They need to be incentivised to sustain career-long learning in terms of accreditation, financial support and allowances. They need a career structure which allows them to use their learning outside of classroom teaching in collaboration with their peers. All of these stipulations apply to the future digital learning strategy.

Reflecting on the above, the ASTI is strongly of the view that the Department of Education must enlarge its vision for teachers' professional learning. It must move beyond a provider role (provision of support services or agencies) to an enabling one, namely creating and maintaining the conditions for career-long teacher learning. The literature on teachers' professional learning is unequivocal on importance of transformative rather than the transmissive modalities.⁸ The recent ERC research on teacher professional learning, while noting that insufficient research has been conducted on Irish teachers, identifies systemic barriers to all forms of teacher professional learning.⁹ It is of note that the recent OECD report on the review of senior cycle stated that most second-level teachers are mainly focused on the transmissive rather than the transformative model.¹⁰ (p.43) The Department of Education is the only agency capable of addressing these barriers.

Leadership in schools: Quality and quantity matter in school leadership. Quality matters because schools are complex communities and require experienced and committed teachers. Quantity matters for the same reasons. Irrespective of the quality, if there are insufficient numbers of personnel in leadership structures the latter will not effectively meet the complex demands of the community. The ASTI has been consistent in its view that there currently insufficient Assistant Principal 1 and 2 posts in schools. The role of middle-management in coordinating digital learning policy was highlighted in the 2008 DES report which stated:

"It was clear from the case-study school evaluations that the use of ICT was more efficient if someone in the school had direct responsibility for its management and co-ordination. Furthermore, efficiency was found to be optimal in those schools where the role of the co-ordinator was clearly defined and the relevant tasks were discharged accordingly." (p.75)¹¹

⁷ https://learningpolicyinstitute.org/sites/default/files/product-files/Effective_Teacher_Professional_Development_BRIEF.pdf

⁸ Kennedy, A. (2014). *Understanding continuing professional development: the need for theory to impact on policy and practice. Professional Development in Education*, 40(5), 688-697

⁹ https://www.erc.ie/wp-content/uploads/2020/11/ERC-TPL-Wellbeing-Literature-Review-Executive-Summary_Final.pdf

¹⁰ https://www.oecd-ilibrary.org/education/education-in-ireland_636bc6c1-en

¹¹ <https://assets.gov.ie/25341/e8f06243628548008512ec38516d7ad8.pdf>

It is of note that research conducted by the ASTI in May 2020 of teachers' experience of remote teaching found that those schools which had dedicated Digital Learning Teams in place experienced considerably less stress as whole-school practices were already in place around teaching methodologies, using VLPs, remote meetings, etc. The Digital Learning Framework itself priorities the centrality of school leadership to achieving the outcomes of the Strategy.¹² It would be risible for the Department to assume that current number of leadership posts in schools will be capable of delivering the objectives of the next Strategy.

System capacity: Over the last decade and more there has been a continual stream of new strategies, frameworks, initiatives and curriculum change in the education system. Teachers have experienced this process as 'initiative overload'. The latter, moreover, occurred in a context of fiscal austerity resulting in larger classes, reductions in school leadership posts, decreases in capitation funding to schools, and cuts to salary. The introduction of unequal pay scales in 2011 remains a corrosive force across the teaching profession: not just for new entrants who do the same work for less pay. The profession's concerns about teachers' individual and collective capacity to meet this unending process of change have been ignored. This refusal to engage with the lived experience of teachers has, in turn, undermined their morale and level of job satisfaction. Successive ASTI-commissioned research has found that teachers' levels of job satisfaction dropped from 77% in 2009 to 48% in 2020.¹³ There is an urgent need for greater policy alignment and attention to system capacity as noted in the aforementioned OECD report. Teachers cannot continue to experience change in the current fragmented manner. There is a need for a top-level policy dialogue on this systemic problem in advance of any new national strategy.

3. Your comments and observations on the key areas and priorities that should be addressed in the development of the new Digital Strategy for Schools.

The new digital strategy for schools has to be an ambitious strategy. The pandemic has catalysed a global debate on how education, knowledge and learning have to be reimagined in a world of increasing complexity, precarity and interdependence. The vision underpinning the digital strategy will be critical in terms of overall purpose and direction to the education system. Equitable quality inclusive education for all must be central to that vision. The ASTI sets out the key areas which the strategy should address and lists priorities in these areas.

Key area 1: Invest in ICT infrastructure and address the digital divide

Investment in the ICT infrastructure in schools with a particular focus on addressing the digital divide is a priority. All students and all teachers must be provided with the appropriate digital devices to ensure that the potential of technology to enhance teaching and learning is realised. This is a fundamental point. The research during the pandemic repeatedly highlighted the lack of suitable devices for learning across the large sections of the student population. Blended learning – class-based learning supplemented by online interaction and activities – will be utilised in response to future shocks and students' opportunities to engage in this form of learning should not, and cannot be,

¹² <https://www.education.ie/en/Schools-Colleges/Information/Information-Communications-Technology-ICT-in-Schools/digital-learning-framework-post-primary.pdf>

¹³ <http://www.asti.ie/document-library/class-size-and-the-physical-environment-in-our-schools-the/>

contingent on their families' income level. Similarly, teachers should not be required to depend on personal digital devices for their daily work. In a survey conducted by ASTI in May 2020, just 61% of teachers had been provided with a school laptop.¹⁴ Measures to address the digital divide must be to the forefront of the new Strategy. Procurement policies must be based on the premise of no one left behind. 'Joined-up' government initiatives are required to ensure that low-income households have access to, and can afford, broadband.

A key part of the ICT infrastructure in schools is the availability of technical assistance. The latter is problematic for most schools in terms of access, cost and timeliness. It is common knowledge that schools depend on teachers who are 'good with computers' to sort out problems. This is not an acceptable model. The new strategy should provide options to schools based on a multi-annual funding model.

Key area 2: Invest in the teaching profession

Investing in the teaching profession first and foremost requires that schools have adequate numbers of teachers to teach the curriculum. In our second-level schools there is a dual problem of a high pupil: teacher ratio and a teacher supply problem. In addition, teachers' working day is almost exclusively occupied with classroom teaching with minimal time for other professional work. ASTI research demonstrates that the majority of teachers – 87% - teach full-time hours.¹⁵ Teacher workload is consequently massive. Earlier ASTI research in 2018 found that teachers' average working week was 40+ hours.¹⁶ In turn, this excessive workload is impacting on the morale and wellbeing of the profession, manifested in declining levels of job satisfaction and problems in supply and retention.

It is important that the ASTI present this context to the Department of Education in this and other policy submissions. System capacity should be a major concern for the Department of Education and the wider government. The former is constituted not just by the quality of the profession, teachers' knowledge and pedagogical skills, their passion for their work and motivation to help their students flourish. It is also determined by teachers' working conditions, in particular the time they have to conduct their multiple roles; the availability of teaching resources and the quality of the school environment; their level of remuneration; and opportunities for career progression and leadership. The OECD report on senior cycle is explicit on the need to factor in generic implementation supports into the process of policy-making from the outset. From the ASTI's perspective, problems of teacher workload, unequal remuneration, lack of time for non-classroom teaching work and deteriorating morale are highly problematic in terms of enabling transformative change processes in our schools.

Teachers' professional learning is absolutely an important pillar in any new strategy. However, exclusively focusing on teachers' professional learning as the only modality of investing in the profession is both short-sighted and ineffective. Creating sustainable working conditions will increase motivation and capacity for individual and collective teacher learning. A weakness in the current model of professional learning is its individualist premise. All of the research underlines that teachers learn best when they have opportunities for both individual and collective learning in their

¹⁴ <https://www.asti.ie/document-library/asti-survey-on-remote-teaching/>

¹⁵ <https://www.asti.ie/document-library/asti-survey-rebuilding-our-school-communities-teachers/>

¹⁶ <https://www.asti.ie/document-library/teachers-work-work-demands-and-work-intensity-march-2018/>

school/practice context.¹⁷ This embedded model requires time across a number of dimensions – school-release time to engage in learning and teaching-release time to engage in teacher collaboration. Leadership is also critical in this regard: schools must have leadership structures in place which can encourage, support and build on both forms of learning. The Department of Education should introduce a free post-graduate programme for leading digital learning.

In the context of the digital strategy, it is important to distinguish the range of skills that are necessary for teachers. Technical skills are important but teachers equally need to develop pedagogical skills for teaching in digitally enriched environments. The current strategy acknowledges this imperative in terms of the TPACK framework. The observations contained in the current strategy on teachers' professional learning and school development remain both pertinent and un-addressed.

The ASTI is also concerned that there are unrealistic expectations concerning the capacity of teachers to develop their own digital content. This proved very challenging for many teachers during remote teaching. It is also time-consuming. Scoilnet should be upgraded to provide digital resources for all subject areas.

Further dialogue is required around the boundaries of teachers' work in a digitally enriched environment. Synchronous and asynchronous teaching, individualised learning, content preparation, communication with students and parents, communications from school management are all issues which impact on teachers' workload and working conditions. The right to disconnect is another key issue as is the requirement for agreed protocols around inspection/evaluation of remote teaching and learning. All have an industrial relations dimension. The Department of Education needs to engage with the teacher unions and school management bodies to address these and other emerging issues arising from the digital transformation.

Key Area 3: Leadership in schools

The ASTI has already referred to the importance of school leadership in schools. The biggest problem at present in terms of school leadership is the inadequate number of Assistant Principal Posts in schools. Across a range of policy areas, schools are unable to fully deliver on core strategic objectives because of inadequate leadership capacity. Evaluation and inspection reports from the Inspectorate on, for example, special educational needs, whole-school guidance and frameworks for wellbeing highlight the centrality of school leadership for effective implementation, guidance, review and collective learning in the iterative process of School Self-Evaluation. The ASTI is aware that many teachers are not engaged in a meaningful way with the SSE process due to workload, time constraints and poor communication structures. The next digital strategy will require sustained school leadership to build on the massive experiential learning of both teachers and students over the pandemic. It is imperative that the number of Assistant Principal Posts in schools are restored to pre-austerity levels and that teachers in all schools are provided with reduced time-tables to enable them to deliver on their leadership roles.

¹⁷ <https://www.studentachievement.org/wp-content/uploads/teacher-learning-what-matters.pdf>

Key Area 4: Digital literacy skills for all learners

A consistent finding from research on remote teaching has been the wide variation in students' skills in using digital technologies. However, the concept of digital literacy skills incorporates more than technical competence in using software applications. The PDST defines digital literacy as a set of eight competences that enable participation in a digital world.¹⁸ This definition is more comprehensive than that contained in the current strategy. It would be important for the next strategy to adopt a definition of digital literacy which identifies all of the domains – technical, cognitive, social, ethical, wellbeing – which require to be addressed. Some of these competencies are, to some degree, reflected in revised specifications across both the junior and senior cycle. However, the next strategy must give clear guidance to schools on how best to both make visible and embed digital literacy across the curriculum and within subjects and programme areas. A further requirement is that of alignment with other Departmental strategies, most notably the Wellbeing Policy Framework and Statement of Practice, the revised the Literacy and Numeracy Strategy and Strategy for Education for Sustainable Development. Policy developments in the European Union will also have import for the strategy, in particular the EU Digital Decade framework and the EU Education Area by 2025.¹⁹

All too often the ethical dimension of students' digital skills is confined to concerns about cyber-bullying. The latter is a pervasive negative phenomenon in young people's lives and requires coherent societal responses. However, young people also need skills to live in a world where the very idea of knowledge and objective facts is under threat. It should be of profound concern to all that PISA 2018 results show that when students undertook literacy tasks which required them to understand implicit cues pertaining to the content or source of the information, an average of just 9% of 15-year-old students in OECD countries were able to successfully distinguish facts from opinions.²⁰ (While this figure is up from 7% in 2000, in the meantime digital transformation has been exponential) And while Irish 15-year olds scored above the OECD average in this and other tasks, there is no room for complacency given the knowledge we now have of the operation of digital platforms in political, social and cultural spaces. Algorithms that divide users into social media echo chambers that amplify some views and insulate from opposing arguments that may alter beliefs are not design flaws. It is the operating model. The recent cyber-attack on the HSE is a wake-up call about the need to equip all citizens with digital literacy skills to protect not only individual privacy but equally create a collective response to societal threats such as cyber-attacks and the 'dark web'.²¹ The 2021 amended OECD Recommendation on the Protection of Children in the Digital Environment provides good guidance on overarching policy frameworks which have practical import for the next Irish strategy.²² Finally, digital

¹⁸ <https://www.pdsttechnologyineducation.ie/en/NEWS/Developing-Digital-Literacy-Skills.html>

¹⁹ https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en; https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en

²⁰ OECD 2021 *21st Century Readers: Developing Literacy Skills in a digital world* - <https://www.oecd-ilibrary.org/docserver/a83d84cb-en.pdf?expires=1622560265&id=id&accname=guest&checksum=A6F1DBD46DC44052B507A4E6DBC7AC0C>

²¹ http://files.nesc.ie/nesc_reports/en/154_Digital.pdf

²² <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0389%20>

literacy also implies understanding and competences in terms of coding and writing software. Such skills will increasingly become demanded of significant sections of workforce.

Conclusion

The next digital media strategy must address the challenges which impacted on the implementation of the previous strategy. The latter are, in turn, consequent on investment strategies which have placed Ireland at the very bottom of 35 OECD countries in terms of percentage of GDP invested in second-level education. ²³Investment strategies impact on equity in education systems and the pandemic has exposed a digital divide which mirrors other inequalities. Equity must be the underlying principle of the next strategy.

The ASTI cannot emphasise enough that teachers' experience of curriculum change is primarily one of fragmentation with little or no guidance, support or time to integrate multiple strategies. 'Curriculum overload' is consequently their dominant experience. It is of critical importance that the curriculum adaptations required under the next strategy are not 'add-ons' but rather are integrated into current subjects and programmes. Prior to the pandemic, the majority of teachers were using ICT in the classroom on a daily basis: there is already a profession-wide knowledge base which the strategy should build on. The transformative rather than the transmissive model of teacher learning must become the pillar for the next strategy. Leadership within the school community will be central in this regard. Finally, teachers' working conditions, their workload, their level of remuneration and the invidious two-tier pay system are of crucial importance in creating the conditions for transformative change in our schools.

²³ https://www.oecd-ilibrary.org/education/education-at-a-glance-2019_f8d7880d-en